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**DEPARTMENT OF DEFENSE  
FEDERAL  
HAZARD COMMUNICATION  
TRAINING PROGRAM**

**TRAINER'S GUIDE**

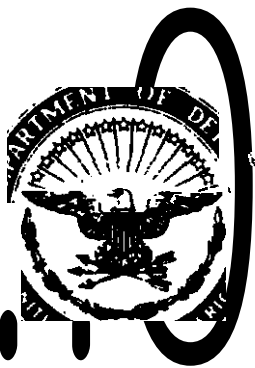
**APRIL 1988**

**OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
(FORCE MANAGEMENT AND PERSONNEL)**

This Hazardous Communications Product was developed by INTERACTIVE MEDICAL COMMUNICATIONS, INC., Waltham, MA, pursuant to Contract No. S-001-1062 with Dynamac Corporation, Contract No. DLA900-82-C-4426.

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FORCE MANAGEMENT  
AND PERSONNEL

## ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-4000

DoD 6050. 5-G-1

### FOREWORD

This publication is issued under the authority of, and in accordance with DoD Instruction 6050.5, "Hazardous Material Information System," January 25, 1978. This publication, the "Department of Defense Federal Hazard Communication Training Program, Trainer's Guide," when used with the "Department of Defense Federal Hazard Communication Training Program, Student's Workbook" and the associated 90-minute videotape, provide training resources to help DoD comply with the training requirements of the Occupational Safety and Health Administration's Hazard Communication Standard (29 C.F.R. 1910.1200).

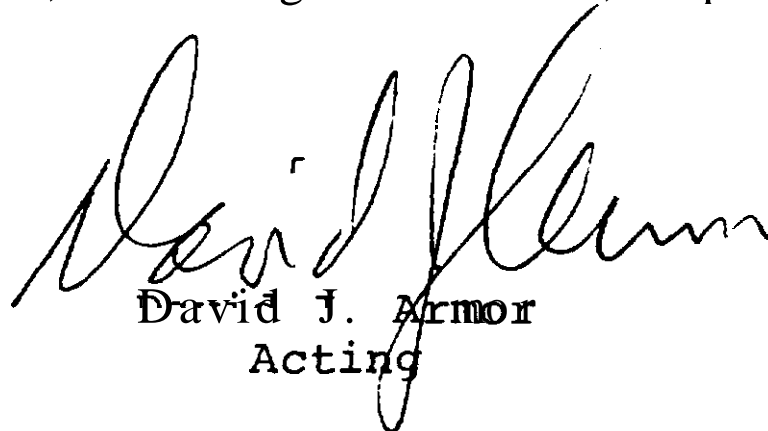
In the interest of economy and efficiency, DoD Components are advised not to develop or purchase any other basic hazard communication training program. Additional in-depth training on specific chemicals or operations is encouraged, however, and can be accomplished using commercial or component developed programs.

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David J. Armor  
Acting

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## INTRODUCTION TO THIS GUIDE

This *Trainer's Guide* contains information to help you facilitate presentation of the Federal Hazard Communication Program in a group setting. As outlined below, this program consists of seven lessons. Each lesson includes one or two videotape segments designed for use with Application Exercises contained in the *Student Workbook* and this *Trainer's Guide*.

- Lesson 1: The Federal Hazard Communication Standard  
(1 Videotape Segment, 1 Application Exercise)
- Lesson 2: Chemical Forms and Exposure Hazards  
(2 Videotape Segments, 3 Application Exercises)
- Lesson 3: Types of Physical and Health Hazards  
(2 Videotape Segments, 4 Application Exercises)
- Lesson 4: Controlling Chemical Hazards  
(2 Videotape Segments, 2 Application Exercises)
- Lesson 5: Introduction to MSDSs and MSDS Physical Hazard Information  
(2 Videotape Segments, 4 Application-Exercises)
- Lesson 6: MSDS Health Hazard Information  
(1 Videotape Segment, 2 Application Exercises)
- Lesson 7: Using Labels and The Hazardous Chemical Inventory  
(1 Videotape Segment, 2 Application Exercises)

This is a multi-media training program. The videotape and workbook learning resources complement each other. Neither resource is intended to stand alone. The videotapes and *Student Workbook* together comprise a complete *SELF-STUDY* training program, which can be used for review purposes, or where classroom training is not feasible. In a class situation, this *Trainer's Guide* should be used to provide an opportunity for trainees to review and apply material presented in each videotape segment. Do this by making use of the following resources in this guide.

### ■ Application Exercises

One or two Application Exercise(s) follow each videotape segment. In the *Student Workbook*, answers and additional information appear on the back of each question page. In this guide, you'll find copies of the *Student Workbook* question pages for each Application Exercise on right-hand pages. On the left-hand page facing each *Student Workbook* question page, you'll find Trainer's Notes. These notes contain answers and additional information for each question taken from the answer pages of the *Student Workbook*, as well as information to help you present the questions and lead the class through the exercise(s).



Where two Application Exercises follow a videotape, the first exercise reinforces material that must be understood before questions presented in the second exercise can be answered.

### ■ Optional Questions

At the end of most Application Exercises in this *Trainer's Guide*, you will find optional questions. If time permits, you may wish to use these optional questions in addition to the preceding questions in the exercise. You can also use the optional questions to help tailor this training program to the needs of a particular class. Note that optional questions do not smear in the Student Workbook.

### ■ Lesson Summaries and Lesson Reviews

Each lesson concludes with a summary that highlights key material covered in the lesson. This *Trainer's Guide* contains a copy of the summary for each lesson that appears in the *Student Workbook*. On the facing Trainer's Notes pages, you'll find a Lesson Review. The Lesson Review contains a series of open-ended questions that you can use to review and highlight key material covered in the lesson.

In addition to suggestions for group application activities, this *Trainer's Guide* contains material you can use to introduce the course, each lesson, and each videotape segment. It also identifies appropriate places for drawing trainees' attention to specific pages of their *Student Workbook* and contains the following training resources.

- . *SUMMARY* for each lesson identical to that contained in the *Student Workbook*.
- Review for each lesson that highlights key material in question/answer format
- . Sample *MSDSS* identical to those contained in the *Student Workbook*
- . Sample *WARNING LABELS* identical to those contained in the *Student Workbook*
- . Sample *HAZARDOUS CHEMICAL INVENTORY* identical to that contained in the *Student Workbook*
- *GLOSSARY* of technical terms identical to that contained in the *Student Workbook*
- *MASTERS* (in the *Trainer's Guide* only) for making overheads for use in suggested classroom activities

As you will see, this is a rich course. The videotapes contain a **great** deal of important information. The opportunity for review, application, or discussion following each videotape segment will help trainees absorb this information more fully. Use the printed resources in this guide and the *Student Workbook* to provide this opportunity for your trainees.

## HOW TO USE THIS TRAINER'S GUIDE

This *Trainer's Guide* contains specific suggestions for proceeding in a classroom situation. Follow along in this *Trainer's Guide* as you lead your class through the program. Begin by referring to pages I-1 through I-9 of this *Trainer's Guide* and orient the class by introducing this training program. Then, for each lesson, refer to this *Trainer's Guide* and do the following

- 1) Introduce the Lesson — refer to the Lesson Introduction and Learning Objectives in this guide.
- 2) Introduce each videotape segment — refer to the Videotape Introduction in this guide and tell trainees what to watch for as they view the tape.
- 3) Show the videotape segment.
- 4) Answer any questions trainees may have after watching each videotape segment,
- 5) Following each videotape segment, engage students in an application activity. Do one or more of the following
  - Lead the class through the associated Application Exercise(s) as a group activity. If you wish, trainees may follow **along** in their workbooks as you present the questions.
  - Refer trainees to the appropriate Application Exercise(s) in the *Student Workbook* and provide time to complete the exercise(e) either individually or in small groups.
  - Ask trainees to close their workbooks and lead the class through one or more of the Optional Questions suggested at the end of the associated Application Exercise(s) in this *Trainer's Guide*.
  - Draw trainees' attention to the Lesson Summary in their *Student Workbook* and quiz trainees on lesson objectives by asking the questions suggested in the appropriate section of the Lesson Review.
- 6) Either introduce the next videotape segment, or draw the trainees' attention to the Lesson Summary in their own copy of the *Student Workbook*.

**Note:** *As you use this guide, notice the following features:*

- *Student Workbook* pages appear on the right-hand pages of this guide. Trainer's Notes and Optional Questions appear on **left-hand** pages
- The lower-right corner of each right-hand page of this *Trainer's Guide* cross-references the *Student Workbook* either by telling you the *Student Workbook* page number, or by **telling** you that there is "No Reference." The latter occurs when the left-hand page of this *Trainer's Guide* contains information (e.g., Optional Questions) for which there is no corresponding information in the *Student Workbook*.
- Directions and notes are printed in italics, whereas material suitable for reading aloud in the classroom is printed in regular type.
- Square bullets, such **as** the ones you see here, are used to highlight key points and **major** topics covered in a lesson.

## CLASS SCHEDULE

It is anticipated that this training program will take a minimum of four hours, including a short break. The approximate times for each lesson are shown below.

Time for group activities can be extended to permit more time for practice using MSDSS, or to cover **specific** chemical hazards to which your trainees may be exposed.

- Program Introduction and Lesson 1: approximately 30 minutes
- Lesson 2: approximately 35 minutes
- Lesson 3: approximately 30 minutes
- Lesson 4: approximately 30 minutes
- Lesson 5: approximately 35 minutes
- Lesson 6: approximately 30 minutes
- Lesson 7 and Program Wrap-Up: approximately 25 minutes

## SEQUENCE OF LEARNING ACTIVITIES

Introduction Welcome, attendance/roster, class schedule, course overview

Lesson 1      Introduce Lesson 1: The Federal Hazard Communication Standard

Introduce and show Videotape Segment 1: The Federal Hazard Communication Training Program

Application Exercise 1

Lesson 1 Review and **Summary**

Present facility-specific information

- How to obtain **MSDSs**
- Location and availability of Hazardous Chemical Inventory and written Hazard Communication Program
- . Training on **specific** chemical hazards

Lesson 2      Introduce Lesson 2: Chemical Forms and Exposure Hazards

Introduce and show Videotape Segment **2A**: Chemical Forms

Application Exercises 2A-1 and 2A-2

Introduce and Show Videotape Segment 2B: Routes of Exposure

Application Exercise 2B

Lesson 2 Review and Summary

Lesson 3      Introduce Lesson 3: **Types** of Physical and Health Hazards

Introduce and show Videotape Segment **3A**: **Types** of Physical Hazards

Application Exercises 3A-1 and 3A-2

Introduce and show Videotape Segment 3B: Types of **Health** Hazards

Application Exercises 3B-1 and 3B-2

Lesson 3 Review and Summary

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**B R E A K**

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|          |   |
|----------|---|
| Lesson 4 | <p>Introduce Lesson 4: Controlling Chemical Hazards</p> <p>Introduce and show Videotape Segment 4A: Engineering Controls and Personal Protective Equipment</p> <p>Application Exercise 4A</p> <p>Introduce and show Videotape Segment 4B: Administrative Controls</p> <p>Application Exercise 4B</p> <p>Lesson 4 Review and Summary</p>   |
| Lesson 5 | <p>Introduce Lesson 5: Introduction to MSDSS and MSDS Physical Hazard Information</p> <p>Introduce and show Videotape Segment 5A: Physical Characteristics Information</p> <p>Application Exercises 5A-1 and 5A-2</p> <p>Introduce and show Videotape Segment 5B: Physical Hazard Information</p> <p>Application Exercises 5B-1 and 5B-2</p> <p>Lesson 5 Review and Summary</p> |
| Lesson 6 | <p>Introduce Lesson 6: MSDS Health Hazard Information</p> <p>Introduce and show Videotape Segment 6: Health Hazard Information</p> <p>Application Exercises 6-1 and 6-2</p> <p>Lesson 6 Review and Summary</p>  |
| Lesson 7 | <p>Introduce Lesson 7: Using Labels and the Hazardous Chemical Inventory</p> <p>Introduce and show Videotape Segment 7: Using Labels and the Hazardous Chemical Inventory</p> <p>Application Exercises 7-1 and 7-2</p> <p>Lesson 7 Review and Summary</p> <p>Training Program Wrap-Up</p>   |

## HOW TO PROCEED

Before attempting to lead the course in a classroom setting, take it yourself as a self-study using the *Student Workbook* in conjunction with this *Trainer's Guide*. Make sure you are thoroughly familiar with all the course materials. If you are not a subject-matter expert, make sure you know the name of the person(s) at your facility who can respond to questions you maybe unable to answer for your class.

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**Note:** *Occupational safety and health is a complex subject. No one can be expected to have all the answers in his or her head. Don't be embarrassed to say "I don't know" if someone asks a question that you can't answer, or if you're unsure of the answer — but do make sure that you know where to go for answers. Refer trainees to the person responsible for safety and health at your facility, or follow through yourself. Promise to get the answer for your trainee(s), make a note of the question, consult an expert to get the answer, and communicate the answer(s) to your trainee(s).*

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As you proceed through this program yourself, read the material for each lesson contained in this *Trainer's Guide* and decide how you want to conduct your class. Consider the following options:

- . Which Application Exercises in the *Student Workbook*, if any, do I want trainees to complete individually or in groups?
  - Which question(s) in this *Trainer's Guide* will I ask to stimulate classroom discussion?
  - . What additional information, if any, should be presented about the chemical hazards or hazard communication program at our facility?
- 

**Note:** *When giving this course, remember that the Application Exercises are NOT intended as tests. Instead, view them as resources to help trainees identify key information and learn how to put this information to work. Ask them to answer the selected questions as best they can. Stress the additional information given with the answers. Doing so will help trainees get the most out of this course.*

In addition to planning how you will cover each lesson, make sure that the following has been done

A copy of **Facility/Agency-specific** Information Sheet (see page **TG-9**) is completed prior *to training session*.

— Training program schedule completed

Attendance sheets prepared for trainees' signatures

Trainees and their supervisors informed of time and location of training program

Training room reserved

All required training program materials available

## **COURSE MATERIALS AND RESOURCES**

To conduct your training program, you will need the following materials and resources:

This *Trainer's Guide*

Videotape 1 — contains segments 1 to 4A

Videotape 2 — contains segments 4B to 7

**Note:** When **VHS** or **BETA** videotapes are used, all seven segments will be included on **ONE** tape.

Videotape player and monitor(s) or projection screen to permit viewing by **all** trainees

Copy of the *Student Workbook* for yourself and each trainee

Training Program Schedule for distribution to trainees

Chalkboard, whiteboard, flip chart, and/or overhead projector for use in group activities

Contact who can answer questions not covered in this training program

— (Optional) Copy of MSDSs, warning labels, and the Hazardous Chemical Inventory for your facility

FEDERAL HAZARD **COMMUNICATION** TRAINING PROGRAM  
**FACILITY/AGENCY-SPECIFIC** INFORMATION

*[To be filled out before the training session]*

Facility

- Name:
- Location

Safety Industrial Hygiene, and Occupational Health Office(s)

- Location
- . Telephone number:
- Location
- . Telephone number:
- Location
- Telephone number:

Material Safety Data Sheets

- . Location
- Telephone number:
- How to obtain copies:

Hazardous Chemical Inventory

- . Location:
- Telephone number:

Facility Hazard Communication Program

- Location

Emergency Telephone Numbers

- Spill:
- Leak:
- Fire:
- . First aid:



## **COURSE INTRODUCTION**

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## TRAINER'S NOTES: Course Introduction

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**Note:** *From this point in the Trainer's Guide, right-hand pages **are** reserved for information contained in the Student Workbook.*

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*To orient students and introduce the course, -make the following points.*

- The Federal government is working to reduce injury and illness caused by chemical materials in workplace.
- This is an opportunity for labor and management to work together in everyone's best interest.
- OSHA's Hazard Communication Standard, issued in 1983 and revised in 1987, protects employees' right to —
  - know about chemical materials they work with; and
  - learn how to work safely with these chemical materials.
- Executive Order 12196 of 1980 and 29 **CFR** Part 1960 provide the authority for implementing this Standard within the Federal sector.
- This training program was developed for federal government employees to provide the information and training needed to help protect them from hazardous chemical materials that may present health and safety risks on the job.
- Take this training program seriously and learn all that you can — your health and safety depend on it.

### Course Overview

*List lesson titles for trainees; refer to a handout of the class schedule that includes lesson titles, or invite trainees to look at the Overview that begins on page **I-1** of their workbook.*

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## COURSE INTRODUCTION

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The Federal government is working to reduce the risk of injury or **illness** caused by hazardous chemicals in the workplace. Accomplishing this goal requires information and communication. Everyone needs to know about the hazardous chemicals they work with — whether the material poses a risk to safety or health, and how to minimize or eliminate any such risks.

The Hazard Communication Standard was issued by the Occupational Safety and Health Administration (OSHA) in 1983 and revised in 1987. Executive Order 12196 of 1980 and 29 **CFR** Part 1960 provide the authority for implementing this Standard within the Federal sector. The Hazard Communication Standard helps protect your right to work in a safe and **healthful** environment. It requires that you be:

- informed about hazardous chemicals in your workplace; and
- . trained to work safely with these materials.

With respect to Federal civilian employees, this is an excellent opportunity for labor and management to work together in the presentation of the program. A joint effort will assure the success of the program because it involves the participation of everyone.

Working safely with chemical materials is a team effort. This workbook is part of a Federal training program designed to make you a knowledgeable member of the team. Your safety and health, as well as that of your co-workers, depends on your active participation in this program.

Learn about chemical materials, what forms they take, what safety and health risks they present, how they can enter your body and affect your health. Learn to recognize hazards, and learn how to control these hazards. Then, put your learning to work and help make your workplace safer and more healthful for everyone.

### Course Overview

This course consists of the following seven lessons

- Lesson 1: The Federal Hazard Communication Standard

This lesson introduces you to the Standard issued by **OSHA**, as it applies to the Federal agencies. Then it identifies the goals of the Hazard Communication Standard and describes each of the actions required.

**STUDENT WORKBOOK PAGE: I-I**



**■ Lesson 2: Chemical Forms and Exposure Hazards**

This lesson describes the forms that chemical materials can take. It helps you recognize potential sources of exposure to chemicals in the workplace. It also describes how chemicals can enter your body when exposure occurs.

**■ Lesson 3: Types of Physical and Health Hazards**

Chemical materials can present hazards, either to your physical safety or to your health. This lesson describes specific types of chemical hazards in each category and helps you understand the risks associated with each type.

**■ Lesson 4: Controlling Chemical Hazards**

This lesson introduces you to the ways in which chemical hazards can be controlled. It describes engineering/mechanical controls, types of personal protective equipment, and various administrative/procedural controls. Then it tells you about ways that you can detect uncontrolled chemical hazards in your workplace and what to do about them.

**■ Lesson 5: Introduction to MSDSs and MSDS Physical Hazard Information**

Material Safety Data Sheets (MSDSs) are required by law to identify chemical materials, describe important physical properties, report known hazards, and identify required controls. This lesson shows you how to use those sections of the MSDS that identify chemical materials, physical properties, physical hazards, ways of controlling physical hazards, and correct procedures to follow if a fire, spill, or leak occurs.

**■ Lesson 6: MSDS Health Hazard Information**

This lesson shows you how to use information on the MSDS that describes health hazards and protective equipment required to guard against exposure to these health hazards. It also covers special precautions given on the MSDS, such as correct procedures for handling and storing the material safely.

**■ Lesson 7: Using Labels and The Hazardous Chemical Inventory**

The Hazard Communication Standard requires every workplace to use warning labels and maintain a Hazardous Chemical Inventory. This lesson identifies the information that these resources must contain and shows you how to use these documents to help protect yourself from chemical hazards.

**Note:** *Pages I-3 and I-4 of the Student Workbook contain information that is primarily of interest to trainees taking the course as a **self-study**. In a classroom situation, you can skip **over** these two pages of ~~the~~ Student Workbook and begin Lesson 1.*

**Course Materials**

Each lesson contains two types of resources videotape and workbook, The videotape covers the lesson content. For each lesson, this workbook contains the following

- . *LESSON INTRODUCTION* — highlights what the lesson covers
- *LEARNING Objectives* — presents a checklist of statements describing what you should be able to do when you have completed the lesson
- . *LEARNING RESOURCES* — identifies the specific videotape viewing segments and workbook exercises available to help you achieve the stated learning objectives
- . *DIRECTIONS FOR PROCEEDING* — gives step-by-step instructions for taking the lesson as a self-study
- *VIDEOTAPE INTRODUCTIONS* — highlight what to look for when watching each videotape viewing segment; provide space to take notes
- . *APPLICATION EXERCISES* — provide the opportunity to apply your videotape learning and to discover additional information
- *LESSON SUMMARY* — summarizes information presented in the lesson and serves as a job aide for quick review of key points

The Appendices in this workbook contain examples of the three documents covered in Lessons 5, 6, and 7: MSDSS (Appendix A), Warning Labels (Appendix B), and the Hazardous Chemical Inventory (Appendix C). Application Exercises in these three lessons provide practice using these documents. In addition, Appendix D contains a glossary of key technical terms introduced throughout the course. Refer to this glossary whenever you need to check the definition of a technical term.

**How to Take This Course**

If you are taking this course with an instructor in a classroom environment, the instructor will tell you how to proceed and guide you through the course.

If you are taking this course as a self-study, complete the lessons in numerical order. Begin each lesson by reading the introduction, learning objectives, and list of learning resources for the lesson in this workbook. Then follow the “Directions for Proceeding,” which tell you the order in which you should complete the learning resources. If you wish, you may check off each learning resource as you complete it.





When taking this course, remember that the workbook application exercises are *NOT* intended as tests. Instead, view them as resources to help you identify key information and learn how to put this information to work. Answer all the questions as best you can, and then follow the instructions given for checking your answers. Make sure to read the additional information given with the answers. This will help you get the most out of this course.

If you wish, you can go back and review any videotape segment before proceeding to the next learning resource. Do this when you feel that you missed some important information, or might understand it better if you saw it again. For example, you might want to review a videotape segment if you have difficulty completing an associated application exercise, or if you find that you answered a number of the questions incorrectly.

Before proceeding from one lesson to the next, go back and review the stated learning objectives. Check off those you think you can do. If some remain unchecked, review the appropriate learning resource(s), or ask your course administrator for assistance.